The results of Straus also afford another instance of the important functions of the nasal mucous membrane in ridding the inspired air of the micro-organisms which it may contain, for in none of the cases in which tubercle bacilli were found was there any sign of tuberculosis of the lungs, which would have been expected in at least some of them if the germs had found access to the deeper respiratory tract.

THE GONOCOCCUS: ITS CULTIVATION ON ARTIFICIAL MEDIA AND INOCULATION IN DOGS.

FOR nearly six years after its discovery all efforts to cultivate the gonococcus artificially were unavailing, and in consequence the proof of its pathogenic nature was incomplete. In 1885, however, it was successfully cultivated upon human blood-serum, and its virulence was demonstrated through inoculation into the human urethra. Until very recently human serum has been supposed to be a necessary ingredient of all culture media for its growth, and the difficulties of obtaining this in sufficient quantity have prevented any very general use of cultures of the gonococcus for diagnostic purposes. About a year ago it was discovered that the addition of urine to the culture medium afforded the conditions necessary. It was at first supposed that this depended upon the presence in the urine of certain salts necessary for the growth of the gonococcus. This TURRÓ (*Centralbl. für Bakt. u. Parasit.*, 1894, xvi., No. 1) shows to be a mistake. What is needed for the cultivation of the gonococcus is an *acid* medium.

Although the freshly voided urine in gonorrhœa is usually alkaline in reaction, Turró points out the fact that this is due in great part to its content of pus, since, when this has settled, the supernatant liquid is acid. In this acid urine the gonococcus develops vigorously. The idea was thereby suggested that this might be due to the acidity of the urine, and culture media were prepared of various degrees of acidity to test its accuracy. It was found that the gonococcus grew well on ordinary gelatin which had not been neutralized. Even the addition of a drop of hydrochloric acid to each 100 c.c. of this medium served only to delay the growth, not to prevent it.

These facts are important, since they make it possible very easily to obtain pure cultures of the gonococcus from gonorrhœal pus. Its simple inoculation into such an acid medium is sufficient, since the strong acidity of the medium prevents the growth of any other germs which may be present.

For details of the appearance of the cultures under various conditions we must refer to the original paper.

Another important fact developed by Turró is that the gonococcus thus grown on acid media possesses pathogenic qualities for dogs. A little of the culture introduced under the prepuce, without necessary injury of the mucous membrane or introduction into the mouth of the urethra, produces intense purulent inflammation, which may extend up the urethra to the bladder and kidneys, or may result in a general systemic infection and pyæmia. The gonococci obtained by subsequent culture from these lesions are somewhat smaller than those of man, but are otherwise similar. The infection is less severe in bitches. It was found that gonococci thus virulent when grown on acid media lost their virulence when transferred to alkaline or neutral media. On acid media their virulence was retained for more than a month.

SUDDEN DEATH DUE TO THE HEART.

THIS is the title of an interesting article by COUNCILMAN, read before the Massachusetts Medico-Legal Society, and published in vol. ii., No. 4, of their *Transactions.*

Of endocardial conditions which may lead to sudden stoppage of the heart, thrombosis and embolism are considered the most important, though of rare occurrence. By far the most frequent causes of sudden death are to be found in disease of the heart wall, and by far the most important of these result from lesion of the coronary arteries and consequent diminution of blood supply to the heart muscle. Since the coronary arteries are "terminal arteries," as a rule having no considerable anastomoses with one-another, disease of one of them may seriously impair the blood supply of that portion of the heart wall dependent upon it for nourishment. If sudden stoppage of one of the larger branches occur, infarction of the heart muscle may result. This is, however, rare, and the usual effect of interference with the coronary circulation is the growth of fibrous tissue in that portion of the wall insufficiently nourished—interstitial myocarditis. The patches of fibrous tissue thus formed are prone to stretch and become thin, in which case a true aneurism of the heart results, and, like aneurisms of the vessels, this may rupture. Other causes of rupture of the heart dependent upon disease of the coronary arteries are the formation of patches of necrosis or of fatty degeneration. Fatty infiltration, in which large deposits of fatty tissue beneath the pericardium and in the myocardium occur, is also an occasional cause of rupture of the heart.

In rare cases sudden death may result from pericarditis, where the very rapid accumulation of exudate may overwhelm an already enfeebled heart. The sudden death occasionally observed in cases of aortic stenosis is probably dependent in most cases on the inability of the already overtaxed heart-muscle to cope with a sudden increase of intra-cardial pressure brought about by exertion or by psychic influence.

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